The Separation of Iron and Copper Cations by Paper Chromatography in the Presence of Large Amounts of Carbohydrates

a rising chromatogram (Ref 2) on chromatographic paper from the factory imeni Volodarskiy. A mixture of acetone-hydrochloric acid-water at the ratio 87:8:5 served as a solvent. At other ratios of the three solvents the results become less distinct. The R_f values obtained this way for the two cations agree well with the data from publications (Ref 3). The chromatograms are developed by spraying with an ammonium sulfide solution (Ref 2). The separation of iron and copper in the presence of carbohydrates was investigated at various concentrations of the latter. The presence of glucose and saccharose also in larger amounts does not exert any influence on the passage of the ions of trivalent iron. The R_f value remains constant within the measuring accuracy in all experiments. Glucose and saccharose, however, influence to a high degree the mobility of the ions of bivalent copper. In the presence of these carbohydrates the flow rate of the copper ions is considerably smaller. The higher the concentration of the sugar, the stronger this effect will be. Saccharose effects a higher retardation than glucose. The chromatographic zones of the cationites Fe-

The Separation of Iron and Copper Cations by Paper Chromatography in the Presence of Large Amounts of Carbohydrates

and Cu^{2+} in the development with ammonium sulfide were clearly marked in all experiments in the presence as well as in the absence of carbohydrates. Most probably in the presence of glucose and saccharose the distribution coefficient of the copper ion between the stationary and the traveling phase of the solvent is changed, whereas the distribution coefficient of the iron ion remains unchanged. From these investigations may be concluded that paper chromatography may be used for the separation and determination of Fe^{3+} and Cu^{2+} in solutions containing glucose and saccharose. The identification by means of the R_f value is, however, possible only in the case of iron. In the case of copper the retarding effect of the carbohydrates must be taken into account. There are 1 figure, 1 table, and 5 references, 5 of which are Soviet.

ASSOCIATION: Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti (Moscow Technological Institute for Food Industry)

SOV/75-13-4-26/29

The Separation of Iron and Copper Cations by Paper Chromatography in the Presence of Large Amounts of Carbohydrates

SUBMITTED: April 24, 1957

1. Iron ions--Separation 2. Copper ions--Separation
3. Chromatographic analysis--Performance 4. Carbohydrates
--Chemical effects 5. Ammonium sulfide solutions--Applications

Card 4/4

[redacted]

GENSHAFT, S. A.

1237. The spectrographic analysis of slags from the basic open-hearth furnace. V. V. [illegible], V. G. Pines and S. A. [illegible]. Report of Symposium: "Sovremm—Metody Anal. Metall." M., Metallurgizdat," 1955, 87 [illegible]. Ref. Zhur. Khim., 1956, Abstr. No. 20,5[illegible]. To prepare soln. of samples and standards, mix 0·1 g of the powder with water (20 ml), boil, add a mixture of [illegible] acids (20 ml of HCl and 3 ml of HNO_3) and a soln. of $Cu(NO_3)_2$ containing 2·28% of Cu. Introduce the soln. into a condensed spark discharge by means of a capillary. The analysis is carried out by the photometric interpolation method, or by using a microphotometer and a const. curve. The line pairs used for the determination of MgO, CaO, FeO, SiO_2 and MnO are—Mg 2736·78 - Cu 2766·37; Ca 3179·33 - Cu 3194·09; Fe 2382·04 or 3020·64 - Cu 2400·11; Si 2631·57 - Cu 2882·03; Mn 2949·2 - Cu 2961·6 Å. The limits of the determinable concn. are—MgO 37 to 38, CaO 7 to 25, FeO 3 to 37, SiO_2 11 to 45, and Mn 1·5 to 9%. The mean error, depending on the element, is 3 to 6%.

C. D. KOPKIN

Gershaft, S. A.

Use of Mathematical Statistics for Studying the Reproducibility of the Chemical Analysis of Non-Alloy Steels. [S. A. Gershaft, V. V. Nalimov and V. G. Pules. (*Zavodskaya Laboratoriya*, 1955, 21, (7), 877-880). [In Russian]. Results of chemical determinations of carbon, sulphur and phosphorus in steel are subjected to statistical analysis and reproducibilities at various concentration levels are discussed.

3

Mtlc

pvb

AUTHORS: Ionova, K.I., Genshaft, S.A. 32-24-4-34/67

TITLE: A Method for the Spectral Analysis of Cast Iron Graphite on Magnesium (Metod spektral'nogo analiza chuguna i grafita na magniy)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 4, pp. 459-460 (USSR)

ABSTRACT: In the course of the determination of magnesium in cast iron the fine metal chips on the sand bath are dissolved in hydrochloric- and nitric acid (1:1) and the dissolved magnesium is examined on a ISP-28 spectrograph. A IG-2 generator with carbon electrodes is used as a light source. Standard samples made from synthetic standard magnesite Nr 82 are used, the preparation of which is described. The error limit of this method is given as being + 5.8%; magnesium can be determined within a concentration interval of 0.02-0.45% in cast iron. Analysis of six samples takes 4 1/2 hours. In the case of the determination of magnesium in graphite powder, the latter is annealed for 2 hours at 1000° C; there follows a treatment with hydrofluoric acid, melting in soda at 1000° C for 5 minutes, and dissolution in hydrochloric acid (1:2). Standard samples of magnesite, the production of

Card 1/2

A Method for the Spectral Analysis of Cast Iron Graphite on Magnesium

32-24-4-34/67

which is described, are again used. The employment of an "inner standard" in form of a chromous chloride solution is also necessary. The other conditions are similar to those applying in the case of the determination of magnesium in cast iron. The square deviation is mentioned as being ± 2.53% (relative). Magnesium can be determined in quantities of from 0.5 - 11% in graphite powder, in which case 6 hours are needed for the investigation of five samples. Investigations were carried out in cooperation with N.R. Laletina. There are 4 references, 4 of which are Soviet.

ASSOCIATION: Kazakhskiy metallurgicheskiy zavod (Kazakh Metallurgical Plant)

1. Graphite powders---Spectra 2. Magnesium---Determination 3. Spectrum analyzers---Performance 4. Hydrofluoric acid ---Chemical effects

Card 2/2

KAMBULATOVA, P.M.; GENSHAFT, S.A.

Work of the Central Laboratory of the Kazakh Metallurgical Plant. Zav.lab. 28 no.4:513 '62. (MIRA 15:5)

1. Nachal'nik tsentral'noy laboratorii Kazakhskogo metallurgicheskogo zavoda (for Kambulatova). 2. Nachal'nik spektrokhimicheskoy laboratorii Kazakhskogo metallurgicheskogo zavoda (for Genshaft).
(Kazakhstan--Metallurgical laboratories)

[redacted], Yu.V.

Spectrographic analysis of hearths, basic slags of open-hearth furnaces, and chromium-magnesite refractories. Zav. lab. 30 no.9:1089-1092 '64. (MIRA 18:3)

1. Kuzakhskiy metallurgicheskiy zavod.

80532

18.8200
5.2300

S/126/60/009/05/013/025
E021/E335

AUTHORS: Livshits, L.D., Genshaft, Yu.S. and Ryabinin, Yu.N.

TITLE: The Polymorphic Transformation of Cerium Under Pressure

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol 9, Nr 5, pp 726 - 732 (USSR)

ABSTRACT: Experiments were carried out by the method of displacement of a piston in apparatus for measuring the volume compressibility of solid bodies (Figure 1). This consists of a hydraulic press, a piston and a piezometric device, together with measuring apparatus. Cerium of three compositions was used - Nr 1 contained La $<$ 0.01%, Nd $<$ 0.5%, Pr $<$ 0.5%, Fe $<$ 0.02% ; Nr 2 was that used in earlier work (Ref 2); Nr 3 contained La $<$ 0.3%, Nd $<$ 0.75%, Pr $<$ 0.75%, Fe $<$ 0.1%. Curves of displacement of the piston ΔH against the force F were drawn and these are reproduced in Figure 2. These show that there is a strongly expressed hysteresis effect. In the region of the phase transformation the pressure of transformation p_n is determined as the mean arithmetic value of p_1 and p_2, where p_1 and p_2 correspond to

Card1/3

80532
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E021/E335

The Polymorphic Transformation of Cerium Under Pressure

the transition from one phase to another with increasing and decreasing pressure. From a series of measurements curves of temperature against p_n were obtained for the three types of cerium (Figure 3). These are straight lines parallel to one another. They show that an increase in purity leads to a decrease in the pressure of transformation at a given temperature and an increase in temperature of transformation at a given pressure. The "real" hysteresis can be found by carrying out experiments with different hydrostatic conditions to allow for the effect of friction. Electrical resistance measurements can be used to show polymorphic transformations. Figure 4 shows a curve of electrical resistance against pressure for cerium Nr 1. This shows a hysteresis at 20.5 °C of 1 600 kg/cm^2. Further experiments showed that "real" hysteresis was 1 550 kg/cm^2. Figure 5 shows the change in the total hysteresis with temperature. An increase in temperature decreases the width of the hysteresis loop. At 200 °C the width of the "real" hysteresis loop is less

Card2/3

4

S/126/60/009/05/013/025
E021/E335

The Polymorphic Transformation of Cerium Under Pressure

than the experimental error. It is further shown that at temperatures greater than 280 °C and pressures greater than 18 500 kg/cm^2 no change in volume, i.e. no phase transformation of the first order, can take place. There are 5 figures and 10 references, 6 of which are English, 1 French and 3 Soviet.

ASSOCIATION: Institut fiziki vysokikh davleniy AN SSSR (Institute of High-pressure Physics of the Ac.Sc., USSR)

SUBMITTED: November 24, 1959

Card 3/3

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11.2214

S/190/61/003/004/012/014
B101/B207

AUTHORS: Livshits, L. D., Genshaft, Yu. S., Markov, V. K., Ryabinin, Yu. N.

TITLE: Compressibility and phase diagram of polytetrafluoro ethylene at high pressure

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 4, 1961, 624-629

TEXT: This paper deals with the study of the behavior of polytetrafluoro ethylene (fluoroplast-4, teflon) at high pressure and high temperature considering the fact that this material is widely applicable in high-pressure engineering. Moreover, measurements were made in a wider range of temperature and pressure than listed by the published data available. The following parameters were determined: 1) the volume compressibility in the piezometer according to the piston displacement method. The error of pressure measurement was ± 150 kg/cm^2; the error of volume decrement determination was less than 5%. By means of the apparatus described in Ref. 6 (L. D. Livshits et al., Fizika metallov i metallovedeniye (Metal Physics and Metallography). Metallurgizdat, Sverdlovsk, 2, 726, 1960), pressures

up to 30,000 kg/cm^2 and temperatures up to 300°C could be reached. 2) The linear compressibility was measured by a recording method similar to that developed by P. W. Bridgman (Ref. 7, see below). Measurement was carried out under hydrostatic conditions. Teflon rods, 57 and 200 mm long, density 2.21 g/cm^3 served as samples. 3) The isobaric measurement of the thermal expansion of teflon at different pressure was measured with the same apparatus. The phase diagram, Fig. 2, was plotted on the basis of the data obtained. The phases were denoted according to C. E. Weir (Ref. 2, below). The triple point of the diagram lies at 5000 kg/cm^2 and 66°C. The Table shows the volume decrements $\Delta v/v_0$ at different pressure and temperature. The following was found: 1) The compressibility of phase III is considerably smaller than that of I and II. 2) The polymorphic transition from II to III (at 20°C) is accompanied by a jump of volume change by 2%. The transition from I to II (at 90°C) is accompanied by a jump of volume change by 2%. Fig. 3 indicates that the jump in volume change decreases with increasing temperature. The blurredness of the II-III transitions due to hysteresis may be reduced if the sample is kept for 1 hr at constant pressure. 3) Between 30-100°C and up to 4000 kg/cm^2 pressure in phase I small jumps were observed in the linear and volume compressibility, that were ir-

reproducible and due to several superimposing crystalline transformations of teflon. 4) These irregularities and the curvature of the I-II transition curve indicates the presence of a further singular point at 65°C and 4000 kg/cm^2. There are 3 figures, 1 table, and 8 references: 1 Soviet-bloc and 7 non-Soviet-bloc. The 4 references to English language publications read as follows: P. W. Bridgman, Proc. Amer. Acad. Arts and Sci., 76, 3, 55, 1948; C. E. Weir, J. Res. NBS, 50, no. 2, 1953, R. P. 2395; R. J. Beecroft, C. A. Swenson, J. App. Phys., 30, 1793, 1959; P. W. Bridgman, Proc. Amer. Acad. Arts and Sci., 58, 165, 1923.

ASSOCIATION: Institut fiziki vysokikh davleniy AN SSSR (Institute of High-pressure Physics, AS USSR)

SUBMITTED: August 17, 1960

Fig. 2. Phase diagram of teflon. Legend: o) data obtained by means of piston displacement; Δ) data of linear compressibility at constant temperature; x) data of isobaric measurement; ----: hysteresis.

S/056/62/043/004/020/061
B102/B180

AUTHORS: Lifshits, L. D., Genshaft, Yu. S., Markov, V. K.

TITLE: The cerium constitution diagram in the range from 20 to 350°C under pressure up to $80 \cdot 10^3$ kg/cm^2

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 4(10), 1962, 1262 - 1267

TEXT: Aim of the present investigations was direct observation of the γ-ε phase transitions predicted by Ye. S. Itskevich (ZhETF, 42, 1173, 1962) at high pressures and temperatures. Cubic face-centered cerium samples 0.5·0.5 mm^2 were used, with initial resistivity of 0.1 - 0.4 ohms. For the measurements up to $30 \cdot 40^3$ kg/cm^2 the device described in PMM, 9, 726, 1960 was used; at higher pressures the sample was heated directly by the measuring current. The phase transition was determined from the jump in resistivity. Its pressure dependence varied greatly at different temperatures and at rising and falling pressures. The height of the jump fell from 32-40% at room temperature to 10% at 200°C and 5-7% at 200-350°C. The

The cerium constitution diagram

δ-α phase boundary deviates from p-T linearity at above 200°C (fig. 4). The time dependence of the relative variation of resistivity, $\Delta R/R$, is nonlinear above 180°C, making extrapolations impossible, beyond this region. The results do not confirm the existence of a critical point below 350°C, they only show the existence of a minimum in the R(p) diagram above $50 \cdot 10^3$ and of a maximum above $70 \cdot 10^3$ kg/cm^2. There are 5 figures.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

SUBMITTED: May 22, 1962

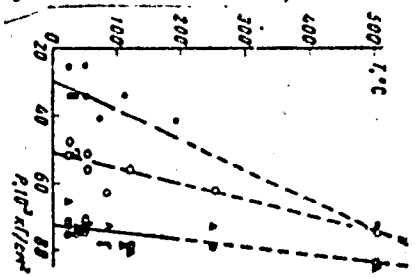

Fig. 5. Diagram of position of resistivity maximum (▲,○) and minimum(○,●); ○,○: pressure is raised; ▲,● : pressure is reduced.

Card 2/2

S/207/62/000/005/003/012
B108/B186

AUTHORS: Genshaft, Yu. S., Livshits, L. D., Ryabinin, Yu. N. (Moscow)

TITLE: Determination of the phase parameters of solid bodies at high pressures by using the method of shifting a piston

PERIODICAL: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 5, 1962, 107-116

TEXT: The known method by P. W. Bridgman (The Physics of High Pressure. London, 1949; The Compression of 46 Substances to 50,000 kg/cm^2. Proc. Am. Acad. Art. Sci., 1940, v. 74, no. 3) to determine the compressibility of solid bodies at 30,000 kg/cm^2 within the temperature range from 20 to 150°C is explicitly described. On the basis of experimental data, corresponding calculations were made for Pb, AgCl, CsCl, pyrophyllite, lithographic limestone, graphite, BN, Bi, and Tl. By means of this method data on the melting of substances under pressure can be derived from the discontinuity of volume, and the phase diagrams can be studied over wide ranges of temperature and compression. The temperature coefficient of volume expansion (β), depending on pressure, was determined for Pb, AgCl, graphite, BN, Tl, and Bi (Table 7). There are 1 figure and 7 tables.

Card 1/2

Determination of the phase...

SUBMITTED: July 11, 1962

Legend to Table 7: (1) p, kg/cm^2; (2) graphite

(1) p, кГ/см²	β·10⁶							
	Pb	AgCl	(2) графит	BN	Tl	Bi		
	20–123°C	17–132°C	21–134°C	23–130 °C	22–133 °C	25–169 °C	Bi [1, 2] 6	30–75 °C
1	90	28	25	35	92	40	40	40
5000	80	–21	25	20	88	23	32	38
10000	71	–56	21	9	85	22	27	46
15000	58	–74	15	1	80	32	22	62
20000	44	–73	8	–2	74	58	24	86
25000	45	–55	–5	–2	69		22	125
30000	37	–20		3	62			

Card 2/2

S/120/63/000/001/036/072
E032/E314

AUTHOR: Genshaft, Yu.S.

TITLE: On the "new" and "old" pressure scales

PERIODICAL: Pribory i tekhnika eksperimenta, no. 1, 1963, 141 - 142

TEXT: The discrepancy between the pressure scales given by Kennedy and La Mori (Progress in Very High Pressure Research, John Wiley and Sons, New York, 1961) (new scale) and that given by Bridgman (Proc. Amer. Acad. Arts and Sci., 1952, 81, no. 4, 169) (old scale) is noted. There appears to be a discrepancy between the resistivity and compressibility data. The discrepancy is now thought to be due to the fact that in the former case the pressures correspond to a transition to a denser modification, while in the second case the quoted pressures are the arithmetical averages of the transition pressures obtained with increasing and decreasing pressure, respectively. It is therefore concluded that comparison of the two scales will not indicate whether the old scale is subject to errors or not. The importance of hysteresis effects is emphasized. There is 1 table.
Card 1/2

On the "new" and ....

S/120/63/000/001/036/072
E032/E314

ASSOCIATION: Institut fiziki zemli AN SSSR (Institute of Physics of the Earth of the AS USSR)

SUBMITTED: July 14, 1962

Card 2/2

GENSHAFT, Yu.S. (Moskva); LIVSHITS, L.D. (Moskva); RYABININ, Yu.N. (Moskva)

Determining the parameters of the state of solids under high pressures using the displacive piston method. PMTF no.5:107-116 S-O '62. (MIRA 16:1)
(High-pressure research)

L 10660-63
EWP(q)/EWT(m)/BDS--AFFTC/ASD--JD

ACCESSION NR: AP3001209 S/0078/63/008/006/1302/1306

AUTHOR: Livshits, L. D.; Genshaft, Yu. S.; Ryabinin, Yu. N. 56 54

TITLE: Phase diagram of crystal hydrates $MgSO_4$ at high pressures 11

SOURCE: Zhurnal neorganicheskoy khimii, v. 8, no. 6, 1963, 1302-1306

TOPIC TAGS: phase diagram, crystal hydrates of MgSo sub 4, polymorphic transition, phase transitions, MgSO sub 4

ABSTRACT: A phase diagram of the crystal hydrates of MgSO sub 4 was constructed from measurements obtained by the "piston displacement" method; data was obtained at 20 degrees by volume compressibility of salts which were previously dehydrated at 200 degrees. A polymorphic transition in the region of 4500 kg/sq.cm. pressure was discovered. The phase transition in the crystalline hydrates is sensitive to the quantity of water of crystallization; by decreasing the content of bonded water, the discontinuities in the volume upon compression are blurred, down to a complete disappearance of separate transitions. There is a limit in the piston displacement method above which the liberated water interferes with the measurement of change in volume decrease with pressure. Actual crystalline conditions of the salt under pressure can be studied by X-rays, but it may be assumed that

Card 1/2

L 10660-63
ACCESSION NR: AP3001209 2

significant volume change with the transitions indicates important structural changes in the material. Orig. art. has: 3 figures.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of chemical Physics, Academy of Sciences SSSR). Institut fiziki Zemli Akademii nauk SSSR (Institute of Earth Physics, Academy of Sciences SSSR)

SUBMITTED: 28May62 DATE ACQD: 01Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 004 OTHER: 003

kes
Card 2/2

L 18355-63 EDS

ACCESSION NR: AP3003960 S/0057/63/033/007/0867/0871

52
47

AUTHOR: Gonshaft, Yu.S.

TITLE: Possibility of employing transition pressure scale reference points

SOURCE: Zhurnal tekhnicheskoy fiziki, v.33, no.7, 1963, 867-871

TOPIC TAGS: pressure hysteresis, transformation pressure, polymorphism

ABSTRACT: The discrepancies between the values of polymorphic transition or transformation pressures determined on different samples and in different laboratories are discussed with particular reference to those for Tl, Cs and Bi as measured by different investigators. A qualitative argument is given indicating that the average of the transition values obtained with increasing and with decreasing temperature or pressure, commonly taken as the "true" value in the presence of hysteresis, is not the thermodynamic equilibrium value, but that the latter lies nearer the high temperature or the low pressure edge of the hysteresis region. The differences between the transition pressures observed for the same first order transition are ascribed to the presence of hysteresis, the magnitude of which depends on sample purity and apparatus configuration. It is suggested that a more reliable calibration

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L 18355-63
ACCESSION NR: AP3003960

5

of the high pressure scale can be obtained by the use of melting points of the pure substances and various physical quantities that depend on pressure, such as compressibility and electrical conductivity. "In conclusion I convey my deep gratitude to Ye.G.Ponyatovskiy for making available his data on the InSb phase diagram, and also to Yu.N.Ryabinin, L.D.Livshits, and V.K.Markov for discussing the work and for valuable suggestions." Orig.art.has: 1 figure and 1 table.

ASSOCIATION: Institut fiziki zemli, Moscow (Geophysical Institute)

SUBMITTED: 13Jun62 DATE ACQ: 07Aug63 ENCL: 00

SUB CODE: PH, CH NO REF SOV: 006 OTHER: 011

Card 2/2

L 11295-65 EWT(m)/EWA(d)/EWP(k)/EWP(t)/EWP(b) Pf-4 JD/HW/JG

ACCESSION NR: AP4043369 S/0181/64/006/008/2449/2452

AUTHOR: Yevdokimova, V. V.; Genshaft, Yu. S.

TITLE: Compressibility of cerium up to 30,000 kg/cm^2

SOURCE: Fizika tverdogo tela, v. 6, no. 8, 1964, 2449-2452

TOPIC TAGS: cerium, cerium compressibility, α cerium compressibility, γ cerium compressibility

ABSTRACT: The compressibility of γ-cerium was studied by the "piston-displacement" method and by the x-ray diffraction method. From the results of experiments, the dependence of the volume decrement $\Delta V/V_0$ on pressure for both α-cerium and γ-cerium was determined. The behavior of the γ-cerium (low-pressure phase) was found to be abnormal, i.e., its compressibility increased with increased pressure. The α-cerium (high-pressure phase) behavior under pressure was normal, i.e., the compressibility decreased with pressure increase. The polymorphic transformation $\alpha \rightleftarrows \gamma$ under pressure was found to take place at approx 7000 kg/cm^2, but residual γ-cerium was found at pressures as high as 14,000 kg/cm^2, and the α-cerium phase can be preserved under conditions

Card 1/2

L 11295-65
ACCESSION NR: AP4043369

of very slow pressure decrease for as long as one or two years. Orig. art has: 4 figures, 1 table, and 1 formula.

ASSOCIATION: Institut fiziki vy*sokikh davleniy AN SSSR, Moscow (Institute of Physics of High Pressures, AN SSSR)

SUBMITTED: 04Mar64 ATD PRESS: 3104 ENCL: 00

SUB CODE: IC, ME NO REF SOV: 008 OTHER: 009

Card 2/2

KRESHKOV, A.P.; MYSHLYAYEVA, L.V.; GENSHAFT, Yu.S.; KRASNOSHCHEKOV, V.V.

Interaction of silicohydrofluoric acid with benzidine. Zhur.neorg.khim. 9 no.1:183-186 Ja '64. (MIRA 17:2)

ACCESSION NR: AP4025911 S/0056/64/046/003/0821/0824

AUTHORS: Livshits, L. D.; Genshaft, Yu. S.

TITLE: Nonlinear dependence of the magnetic transformation temperatures of two invar alloys on the hydrostatic pressure

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 46, no. 3, 1964, 821-824

TOPIC TAGS: Curie temperature, magnetic transformation temperature, phase transition, second order phase transition, invar, coelinvar, elinvar, Curie temperature pressure dependence, high pressure ferromagnetic transformation, ferromagnetic transformation

ABSTRACT: The pressure dependence of the Curie temperature of the elinvar and coelinvar alloys was studied at pressures up to 20 kbar as part of an investigation of second-order phase transitions under pressure. The relation

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ACCESSION NR: AP4025911

$$\Delta\theta = \theta_p - \theta = -ap - bp^2,$$

(θ_p -- temperature of magnetic transformation at pressure p, θ -- temperature, a and b -- constants) is found to hold for both alloys. Although such a nonlinear relation follows from the theory, previous experiments yielded only linear relations, probably owing to the smallness of the range of variation of the pressures employed and in some cases to the smallness of the effect itself. A tentative value $d\Theta/dR = 3\text{--}3.5 \times 10^{11}$ deg/cm is obtained for both alloys (R -- interatomic radius, on the order of 2.5 Å). "The material for the samples was graciously furnished by G. I. Katayev, to whom the authors are deeply grateful. They also thank Yu. N. Ryabinin and R. Z. Levitin for interest in this work." Orig. art. has: 3 figures, 4 formulas, and 1 table.

Card 2/4

ACCESSION NR: AP4025911

ASSOCIATION: Institut fiziki zemli AN SSSR (Institute of Physics of the Earth, AN SSSR)

SUBMITTED: 14Aug63	DATE ACQ: 16Apr64	ENCL: 01
SUB CODE: PH	NO REF SOV: 006	OTHER: 001

Card 3/4

GENSHAFT, Yu.S.; NASEDKIN, V.V.; RYABININ, Yu.N.; PETROV, V.P.

Crystallization of basalt at the pressure of 25 kilobars and temperatures from 800° to 1300°. Sov. geol. 8 no.8:26-31 Ag '65. (MIRA 18:10)

1. Institut fiziki Zemli AN SSSR i Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR.

GENSHAFT, Yu.S.

Crystal modification of Bi and the Bi phase diagram. Fiz. met. i metalloved. 19 no.3:461-462 Mr '65. (MIRA 18:4)

1. Institut fiziki Zemli AN SSSR.

L 41068-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG
ACCESSION NR: AP5010496 UR/0056/65/048/004/1050/1053

AUTHOR: Livshits, L. D.; Genshaft, Yu. S. 16 15 14

TITLE: Shift of Curie temperature of gadolinium under hydraulic compression up to 35 kbar 27

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 4, 1965, 1050-1053

TOPIC TAGS: gadolinium permeability, gadolinium Curie point, gadolinium permeability pressure shift, gadolinium Curie temperature shift

ABSTRACT: The pressure dependence of permeability was plotted at a constant temperature at a frequency of 500 cps and an effective field intensity of 5—6 oe. The pressure was applied through a silver chloride medium by the piston displacement method. The specimens were miniature toroids of polycrystalline metal turned from a cast stock of gadolinium with the following admixtures: It and Tb (0.1%), Ca (0.02%), Fe (0.01%), and Cu (0.005%). The temperature fluctuations during the experiment did not exceed 0.5—1C. The pressure dependence curve of the Curie point was plotted on the basis of twelve independent determinations of the pressure points at which the specimen changed to the paramagnetic state. As expected this

Card 1/2

L 41068-65

ACCESSION NR: AP5010496

curve was a straight line with a proportionality factor of 1.34 ± 0.06 degrees per kbar. The mean deviation of the experimental points from the straight line was 0.8C in temperature and 0.6 kbar in pressure. A discontinuity of the curve within the 21--26 kbar pressure range of the curve, as described by Robinson and others (Phys. Rev., 134, 1964, A187), was not observed. Orig. art. has: 3 figures and 1 formula. [FP]

ASSOCIATION: Institut fiziki zemli Akademii nauk SSSR (Institute of Physics of the Earth, Academy of Sciences, SSSR)

SUBMITTED: 09Nov64	ENCL: 00	SUB CODE:	SS,EM
NO REF SOV: 005	OTHER: 007	ATD PRESS:	3232

Card 2/2

L 3400-66 EPA(s)-2/EWT(m)/EWP(w)/EPF(c)/EPF(n)-2/T/EWP(t)/EWP(b)
IJP(c) JD/JG

ACCESSION NR: AP5024209 UR/0020/65/164/003/0541/0544

AUTHORS: Livshits, L. D.; Beresnev, B. I.; Genshaft, Yu. S.; Ryabinin, Yu. N. 33 32 B

TITLE: Change in strength of several substances in the region of polymorphic transitions under pressure

SOURCE: AN SSSR. Doklady, v. 164, no. 3, 1965, 541-544

TOPIC TAGS: polymorphic transition, rubidium chloride, silver nitrate, limestone, calcium carbonate

ABSTRACT: The effect of pressure on RbCl, $AgNO_3$, and limestone was studied. The investigation is an extension of previous work on Bi-Sn alloys published by the authors (DAN, 161, 5, 1965). Axial compression of specimens was determined at high hydrostatic pressures. The specimens were of cylindrical shape, 8-10 mm in diameter, and had a length-to-diameter ratio of 1 to 1.5. Photographs of the deformed samples are presented and stress-strain curves are shown graphically (see Fig. 1 on the Enclosure). It is concluded that pressure affects the strength of different materials differently during polymorphic transitions. Thus the resistance to compression of RbCl increases with pressure, that of limestone

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L 3400-66

ACCESSION NR: AP5024209

increases also, but more slowly, and that of $AgNO_3$ shows a decrease with increase of pressure. Orig. art. has: 3 graphs and 1 photograph.

ASSOCIATION: Institut fiziki Zemli im. O. Yu. Shmidta, Akademii nauk SSSR (Institute of Geophysics, Academy of Sciences, SSSR)

SUBMITTED: 01Feb65 ENCL: 01 SUB CODE: SS

NO REF SOV: 003 OTHER: 001

Card 2/3

L 3400-66

ACCESSION NR: AP5024209 ENCLOSURE: 01

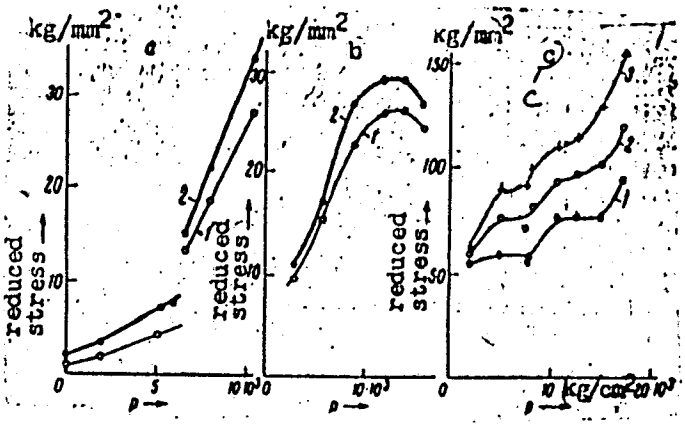

Fig. 1. Dependence of reduced stress on pressure for constant residual deformation (δ = const.). a- RbCl: 1 - δ = 3%; 2 - δ = 10%; b- $AgNO_3$: 1 - δ = 2%; 2 - δ = 10%; c- limestone: 1 - δ = 2%; 2 - δ = 5%; 3 - δ = 10%

Card 3/3

AUTHOR: Genshtak, V.I., Candidate of Econom.Sci., (Ural Polytechnical Institute.)

TITLE: On scientific problems of the economics of the electrical industry. (O nauchnykh problemakh ekonomiki elektropromyshlennosti.)

PERIODICAL: "Vestnik Elektropromyshlennosti" (Journal of the Electrical Industry) 1957, Vol. 28, No. 5, pp. 61 - 62 (U.S.S.R.)

ABSTRACT: This letter is a contribution to discussion on articles by Nelidov and by Pel'tsman and Kanevskiy on economics in the electrical industry published in Vestnik Elektropromyshlennosti No. 9, 1956. The author is in general agreement with Nelidov, but does not agree that concrete economics should be applied to theoretical and (by implication) not to applied science. In the main, Nelidov states correctly the problems in the economics of the electrical industry and the organisation of undertakings but he does not include one of the most important tasks which is the characteristics and classification of production reserves. The second part of Nelidov's article and also the other article are concerned with training to which in the author's opinion more attention should be paid.
No figures, no literature references.

PHASE I BOOK EXPLOITATION 863

Genshtak, Vladimir Iosifovich and Gotlober, Valentin Mikhaylovich

Ekonomicheskaya effektivnost' vnedreniya novoy tekhniki (Increased Economic Efficiency Resulting from the Introduction of Modern Technology) Moscow, Izd-vo "Znaniye," 1958, 37 p. (Series: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya III, 1958, no. 35) 80,000 copies printed.

Sponsoring Agency: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy.

Scientific Ed.: Bayev, L. K.; Ed.: Falaleyeva, T. F.; Tech. Ed.: Gubin, M. I.

PURPOSE: This pamphlet is intended for economists and students of economics interested in certain economic aspects of engineering and the modernization of industrial equipment.

COVERAGE: The authors show that the productivity of labor can be increased only on the basis of continuous technical progress and the introduction of modern scientific and engineering methods in all branches of industry. Individual problems connected with the increased economic efficiency resulting from the

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application of new engineering methods and processes are still in the stage of discussion. The purpose of an economic analysis is to establish whether or not a given solution of an engineering problem is effective. The authors list and discuss the types of data which are used for measuring the effectiveness of modernization. Some of the data and statistics obtained from various plants in the Ural area are given and analyzed. Some data on over-all Soviet production are also given. For example, it is stated that in 1956 there were 1,780,000 pieces of machinery in use in the USSR of which 18.2 per cent were over 20 years old. The engineering and economic advantages of modernization is reflected in 1) the increased productivity of equipment; 2) improved working conditions; 3) widened technological versatility of machines; 4) improved quality of machining; and 5) reduced operational expenditures. There are ten Soviet references.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

Card 3/3

GO/flc
11-24-58

OBUKHOVSKIY, Yakov Mironovich; GENSHTEL', Ya.M., red.; YABLONSKAYA,L.V., red.; KARASEV, A.I., tekhn.red.

[Preparation of coal for coking] Sostavlenie ugol'nykh shikht dlia koksovaniia. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1957. 327 p. (MIRA 11:1)
(Coke industry)

KUZNETSOV, V.I.; BLEDNYKH, A.G.; DOBROVOL'SKIY, A.F.; GENSINA, Ye.D.

Use of products of primary tar from Ukrainian brown coals for disinfection. Zhur.mikrobiol.epid. i immun.,supplement for 1956:36-37 '57 (MIRA 11:3)

(COAL-TAR PRODUCTS) (DISINFECTION AND DISINFECTANTS)

GENSIRUK, L.S. [Hensiruk, L.S.]

First results of scientific investigations of the Marine Hydrophysical Institute of the Academy of Sciences of the Ukrainian S.S.R. in Sevastopol. Geol. zhur. 24 no.5:113-114 '64. (MIRA 17:12)

GENSIRUK, S. A.

GENSIRUK, S. A.: "The spruce forests of the eastern Carpathians, their growth and restoration." Moscow, 1955. Moscow Order of Lenin Agricultural Academy imeni K. A. Timiryazev. (Dissertation for the Degree of Candidate of Agricultural Sciences)

SO: Knizhnaya Letopis' No. 47, 19 November 1955. Moscow.

GENSIRUK, S.A.

USSR/Forestry - Forest Biology and Typology. K-1

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91438

Author : Gensiruk, S.A.

Inst : Lvov Forest Technology Institute.

Title : The Growth of Spruce Trees Under the Conditions of the Eastern Carpathians, as a Function of the Altitude Above Sealevel.

Orig Pub : Nauchn. tr. L'vovsk. lesotekhn. in-t., 1955, 2, 31-44.

Abstract : Highly productive spruce groves grow (locality classes 1, 1a, 1b) at an altitude of 750-1200 m. Above 1200 m, the productivity of the tree stands decreases gradually. At an altitude of 1450 m, the spruce trees are mainly of locality class IV-V. In the years 1952-1954, 34 test grounds were chosen in the most typical, dense and never

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USSR/Forestry - Forest Biology and Typology. K-1

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91438

cut spruce groves of Stanislavskaya and Zakarpatskaya Oblasts. It has been found that processes of humus formation and mineralization at different altitudes above sealevel proceed unequally. In the middle and lower parts of the slopes (altitude 750 - 1050 m), they were more active than in the upper part (1400 - 1500 m). As a result, better soil conditions which are more favorable for the growth of wood stands arise here. It is shown that the causes of inferior growth of the spruce groves in the upper parts (above 1200 m) are a colder and more humid climate, less fertile soils and a shorter vegetative season. Optimal conditions for spruce tree growth are found in the Carpathians at an altitude of approximately 850 - 1110 m above sealevel. Tables of the growth rate according to the average height are given for model spruce plantations as a function of the altitude above sealevel. -- G.G. Abramashvili.

Card 2/2

K

USSR / Forestry. Forest Economy.

Abs Jour : Ref Zhur - Biologiya, No 22, 1958, No. 100163

Author : Gensiruk, S. A.
Inst : Moscow Agricultural Academy imeni K. A. Timiryazev
Title : Characteristics of the Growth and Reproduction of Carpathian Spruce Forests

Orig Pub : Dokl. Mosk. s.-kh. akad. im. K. A. Timiryazeva, 1957, No 31, 332-337

Abstract : It has been established that with increase in elevation above sea level, the reserves of the Carpathian spruce forests gradually thin out, and the heights and diameters of the trees also are reduced (graph given). An altitude of 850-1100 meters above sea level is optimal for the spruce. Success of the preliminary reproduction depends upon the degree of density of the maternal cover, which determines not only the quantitative but also the

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USSR / Forestry. Forest Economy. K

Abs Jour : Ref Zhur - Biologiya, No 22, 1958, No. 100163

qualitative indices of self-seeding and the young growth. Success of the reproduction of hewn-out areas depends upon the steepness and exposure of the slopes and upon the soil. In wood-cutting areas on the southern slopes, having an angle of inclination of 25-30°, with underdeveloped rocky soils - reproduction, as a rule, is unsatisfactory. The wood-cutting areas on the northern and northeastern slopes are reproduced better due to favorable meteorological conditions. Recommendations on the preservation of the young growth and on the cutting down of trees are submitted. -- V. V. Protopopov

Card 2/2

BUKHALO, S.M., doktor ekonom. nauk; GENSIRUK, S.A., kand. sel'skokhoz. nauk; KRAVCHENKO, A.N., gornyy inzh.

Reduce the consumption of wood materials in the coal industry of the Ukraine. Ugol' Ukr. 7 no.7:31-33 Jl '63. (MIRA 16:8)

(Ukraine—Wood)

GENSLER, A.A., inzh.

Erection of a steam gas system. Energ. stroi. no.1:22-29 '65.
(MIRA 18:7)

S/079/60/030/009/006/015
B001/B064

5.3700 2209.

AUTHORS: Dolgov, B. N. (Deceased), Golodnikov, G. V., Gensler, I.B.

TITLE: Catalytic Conversion of Tetraalkyl Silanes. III. Catalytic Dehydrogenation of Trimethyl Propyl-, Trimethyl Butyl-, and Trimethyl Hexyl Silane

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 9, pp. 2988-2995

TEXT: In continuation of their previous paper (Ref. 2), the authors studied the dehydrogenation of silicon hydrocarbons of the series $(CH_3)_3SiR$, (R = C_3H_7, C_4H_9, C_6H_{13}). The investigations were carried out with the catalyst used in the previous investigation (Ref. 2) by Yu. A. Gorin and S. M. Monozon and placed at the authors' disposal. The tetraethyl silane passed through over this catalyst at 500-600° (volume rate 30) was not dehydrogenated: Besides unchanged tetraethyl silane, triethyl silane and diethyl silane, that are formed by the splitting off of ethylene, were detected (Table 1). The gaseous products consisted of hydrogen, saturated hydrocarbons and ethylene. The silanes of the series

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$(CH_3)_3SiR$, however, contain no ethyl radicals and can therefore be dehydrogenated with the above catalyst. Table 2 shows the optimum conditions of the dehydrogenation of trimethyl butyl silane, and Table 3 those of the dehydrogenation of trimethyl propyl silane (depending on the temperatures and volume rates), as well as the yields of the reaction products. The reactions carried out at temperatures above 570°C in the presence of a catalyst proceeded according to Scheme 2 with the bonds C - C and C - Si undergoing cleavage. Only by multiple fractional distillation, in a rectifying column, it was possible to separate the fraction boiling between 84.0 and 84.5°C that (owing to the thiocyanogen number) contained 91.1% silicon olefin. The three intensive lines of the Raman spectrum of the fractions enriched with the silicon olefin are probably caused by the isomers $(CH_3)_3SiCH{=}CHCH_3$ and $(CH_3)_3SiCH_2CH{=}CH_2$. The dehydrogenation product of trimethyl propyl silane appears, according to its spectral analysis, as in the case of trimethyl butyl silane (Ref. 2), to consist for the major part of the isomer of silicon olefin that contains the double bond in

Catalytic Conversion of Tetraalkyl Silanes. III. Catalytic Dehydrogenation of Trimethyl Propyl-, Trimethyl Butyl-, and Trimethyl Hexyl Silane

S/079/60/030/009/006/015
B001/B064

α-position to the silicon. A temperature of 540°C and the volume rate of 45 proved to be the optimum reaction conditions for the dehydrogenation of trimethyl hexyl silane (Table 4). Also here, the Raman spectrum shows in all cases the frequencies characteristic of the double bond. There are 8 tables and 17 references: 8 Soviet, 6 US, and 3 German.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: October 2, 1959

Card 3/3

GENSOR, F.

The television receiver Carmen 4112 U. Tech praca 15 no.1:60-61 J '63.

TSORFAS, S., inzh.; CHENSYUROVSKIY, A., inzh.

Flour for the macaroni industry. Muk.-elev. prom. 24 no.10:13-15 O '58. (MIRA 11:12)

1.Upravleniye mukomol'no-krupyanykh i kombikormovykh predpriyatiy Ministerstva khleboproduktov SSSR.
(Macaroni)

L 15817-66 EWT(1)/EWT(m)/FS(v)-3 SCTB/DIAAP DD

ACC NR: AP6003255 SOURCE CODE: UR/0020/65/165/006/1416/1418

AUTHOR: Paribok, V. P.; Genter, Ye. I.

ORG: Institute of Cytology, Academy of Sciences SSSR (Institut tsitologii Akademii nauk SSSR)

TITLE: The role of an oxygen-replacing gas in a quantitative study of oxygen effect

SOURCE: AN SSSR. Doklady, v. 165, no. 6, 1965, 1416-1418

TOPIC TAGS: radiation injury, plant injury, plant respiration, ionizing irradiation, radiation protection

ABSTRACT: The effect of x-irradiation (50 r/min) on the growth of the main root of bean shoots (*Vivia faba*) was studied using the following gases in the medium: O_2 plus 1% N_2 and other inert gases, and specially purified N_2 and argon. The gasecus medium was introduced into the chamber 10 min prior to irradiation and the plants were removed 5 min following irradiation. Addition of N_2 or Ar to the oxygen decreased the damaging effects of irradiation in that th growth of bean shoots was

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L 15817-66
ACC NR: AP6003255

much greater when these gases were added than when O_2 was solely present. Furthermore, this protective action only applies to the O_2-dependent part of radiation damage since the effect was absent in the absence of O_2 (in a vacuum). These experiments indicate that in studying the radiosensitizing effects of O_2 as a function of its concentration it is necessary to use other methods than the addition of inert gases to vary the O_2 concentration in the medium in forms such as plants and insects, in which the O_2 is carried to the cells via channels too narrow for the replacing gases. The authors thank Academician Yu. B. Khariton for discussion of the work and advice. Orig. art. has: 2 figures.

SUB CODE: 06/ SUBM DATE: 17Jan65/ ORIG REF: 005/ OTH REF: 005

Card 2/2

L 20694-66 EWT(m)
ACC NR: AP6007763 SOURCE CODE: UR/0205/66/006/001/0097/0100

AUTHOR: Paribok, V. P.; Genter, Ye. I.

ORG: Institute of Cytology AN SSSR, Leningrad (Institut tsitologii AN SSSR)

TITLE: The radiation protection effect of inert gases and low molecular narcotics. 5. The radiation protection effect of lower monoatomic alcohols in x-ray irradiation of bean seedlings

SOURCE: Radiobiologiya, v. 6, no. 1, 1966, 97-100

TOPIC TAGS: irradiation resistance, irradiation damage, radiation sensitivity, x ray irradiation, radiation protection

ABSTRACT: Five day old *Vicia taba* bean seedlings of the Russkiy chernyy variety were immersed for two hours in alcohol solutions and irradiated in air, in nitrogen, or in nitric oxide diluted in nitrogen in order to compare the protective effect of alcohols with that of compressed gases. The specimens were irradiated by a RUM-11 device in hermetically sealed glass containers which were filled with a given gas. The dosage was from 50 to 800 rad (51 rad/min) and the filter was 3-mm Al + 5-mm

UDC: 577.391 : 628.58

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L 20694-66
ACC NR: AP6007763

glass (container wall); focussing distance was 60 cm. Inhibition in the growth of the main root was taken as the indicator of irradiation damage. Of the alcohols tested (methyl, ethyl, propyl, and butyl), methyl alcohol was found to have the greatest protective effect. The protective effect vanished when the alcohol was washed off the seedlings prior to irradiation, and no protective effect was observed when the seedlings were immersed in alcohol following irradiation. In the case of ethyl alcohol, the protective effect was less for specimens irradiated in nitrogen while for methyl alcohol the protective effect vanished completely. The protective effect of the alcohols remained for the case of irradiation in the presence of pure oxygen. It is concluded that the protective effect of alcohols cannot be ascribed to a lowering in oxygen content in the cell as a result of stepped-up expenditure of oxygen in the oxidation of the alcohols, and that the radiation protection mechanisms of alcohols and inert gases under pressure are dissimilar. Data on the protective effect of various concentrations of CH_3OH, C_2H_5OH, C_3H_7OH, and C_4H_9OH in air and in nitrogen are presented in tabular form. While the mechanism underlying the protective mechanism of alcohols is not clear, it may involve an adsorption blocking of the radiosensitive structures in the cells which retards the radiosensitizing action of oxygen. Orig. art. has: 2 tables and 1 figure. [14]

SUB CODE: 06/ SUBM DATE: 12Jun64/ ORIG REF: 010/ OTH REF: 009
ATD PRESS: 4223
Card 2/2 BK

GRUNER, Matilda, ing.; GENTILIZZA, Mirjana; FILAJDIC, Mirko, dr ing.

A colorimetric method of the determination of protein in milk by the use of the "Orange G." Kem ind 10 no.7:183-189 Jl '61.

1. Zavod za poznavanje i analizu zivotnih namirnica Tehnoloskog fakulteta Sveucilista u Zagrebu, Zagreb.

GENTILLI, J.

Further success of the scientific works of the Geographical Institute of the Slovak Academy of Sciences abroad. p. 315.

GEOGRAFICKY CASOPIS. (Slovenska akademie ved. Zemepisny ustav) Bratislava, Czechoslovakia

Vol. 10, no. 4, 1958

Monthly list of East European Accessions (EEAI) LC. Col. 9, No. 1 January 1960
Uncl.

YUGOSLAVIA

FUGAS, Mirka; GENTILIZZA, Mirjana; VALIC, F. and VERHOVNIK, S.; Institute for Medical Research and Occupational Medicine (Institut za medicinska istrazivanja i medicinu rada,) Zagreb.

"Air Pollution Studies and Atmospheric Sediment Analysis in the City of Zagreb."

Zagreb, Arhiv za Higijenu Rada i Toksikologiju, Vol 16, No 3, 1965; pp 215-226.

Abstract [English summary modified] : Review of one year's data* on air pollution monitoring in Zagreb reveals that the city is one of the most heavily polluted industrial cities in Europe at this time. Presentation of data on types of atmospheric impurities, correlations with meteorological conditions and seasons of year. Plan, photograph, 3 tables, 5 graphs; 1 Yugoslav and 7 Western ref's; ms rec 30 Jan 65.

*1 Apr 1962 - 31 Mar 1963

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YUGOSLAVIA

FUGAS, Mirka; GENTILIZZA, Mirjana; VALIC, F. and VERHOVNIK, S.; Institute for Medical Research and Occupational Medicine (Institut za medicinska istrazivanja i medicinu rada,) Zagreb.

"Air Pollution Studies in the City of Zagreb. Part Two. Determination of Concentrations of Sulfur Dioxide and Smoke."

Zagreb, Arhiv za Higijenu Rada i Toksikologiju, Vol 16, No 3, 1965; pp 227-249.

Abstract [English summary modified]: Data on SO_2 and smoke concentrations in Zagreb as measured daily for 12 months at 4 locations. Domestic heating furnaces were most culpable and caused extreme ly heavy pollution especially during winter time, suggesting the great potential value of centralized furnaces by block rather than old individual building system. Map, tables, 10 graphs; 1 Yugoslav and 11 Western references; ms rec 30 Jan 65.

1/1

[illegible]

Children, collect medicinal herbs (the export of medicinal [illegible]). [illegible], [illegible] izd-vo [illegible], 1930. 37 p.

GHITU, I.

A new method of founding with casting molds.

p. 1 (Metalurgia Si Constructia De Masini. Vol. 1, no. 9, [illegible] 19[illegible]. Bucuresti, Romania)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2, February 1958

R/009/60/000/005/001/003
A124/A026

AUTHOR: Gențiu, Iuliu, Engineer

TITLE: Contributions to Surface Alloying and Plating by Casting

PERIODICAL: Metalurgia şi Construcţia de Maşini, 1960, No. 5, pp. 390 - 395

TEXT: The author presents results of some experiments made at the ITCME on the application of an external alloyed layer on component parts of steel and cast iron by casting, and results of some experiments of plating by casting. Brief reference is made to the procedure of surface alloying by casting. Experiments were made with paralle-piped steel shapes and cast iron parts. The molds and cores were mixed of the usual materials. The cores were "painted" with alloying materials of different composition and thickness, such as chromium, manganese, nickel and aluminum. Water glass, bakelite lacquer and molasses were used as binders. The recipes were mixed as follows: a) On the basis of Cr and Ni: 60% Fe-Cr powder, 20% Ni powder and 20% water glass; b) on the basis of Mn: 80% Fe-Mn powder and 20% water glass; and c) on the basis of Al: 80% Al and 20% water glass. The alloying "paint" was applied to the cores by: a) spraying, b) a brush, or c) spreading out with a stick. The thickness of the "paint" was

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Contributions to Surface Alloying and Plating by Casting

2 mm and 4 mm, respectively. After painting, the cores were slowly dried in a furnace at 140°C. Two types of basic materials were used for the experiments: steel parts and cast iron parts. The steel parts were made of carbon steel with a content of 0.7 - 0.8% and 0.6 - 1.4% Mn, produced in electric furnaces. The casting temperature of the steel ranged between 1,520 and 1,620°C. The cores were painted with Cr + Ni, Mn and Al alloying materials. Best results were obtained with the Cr + Ni alloying paint at a temperature of 1,550 - 1,600°C, at which the most advantageous ratio of 1/16 ... 1/20 between the alloying paint and the minimum of molten metal enclosing the alloying paint was achieved. Mn paint showed less advantageous results because of the great casting-temperature difference of the steel and Fe-Mn paint. The most efficient alloying temperature was found to be 1,500 - 1,520°C, at which a ratio of 1/8 - 1/10 was achieved. Experiments with Al paint revealed approximately the same results as the Mn paint. At a 2 mm thick layer of Al paint, a 0.5 mm thick alloyed layer was obtained. The cast-iron parts were made of "Fe 21" grey-cast iron molten in revolving furnaces and cast at a temperature of 1,360 - 1,380°C. These parts were alloyed with Mn and Al paints. The results of these two alloys, so similar to each other, were less efficient as in case of steel parts. Several experiments were made with

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Contributions to Surface Alloying and Plating by Casting

plating by casting. In this case the casting cores were lined with 3 mm thick "Incorodal 1" steel sheets. The "OT 45" steel was produced in a Héroult electric furnace and cast at a temperature of 1,540 - 1,560°C. This method is very efficient in case of plating the bottom and internal sections of steel parts. There are 6 figures and 4 references: 3 Soviet (2 translated into Rumanian) and 1 Rumanian.

Card 3/3

GENTIU, Iuliu, ing.

Coring by shooting. St si Teh Buc 15 no.5:30-31 My '63

AUTHORS: Kost, A. N., Gents, F. SOV/79-28-10-29/60

TITLE: Reactions of the Hydrazine Derivatives (Reaktsii proizvodnykh gidrazina) XIX. Condensations of 4-Amino (1,2,4)-Triazole With Esters (XIX. Kondensatsii 4-amino-(1,2,4)-triazola so slozhnymi efirami)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 10, pp 2773 - 2779 (USSR)

ABSTRACT: As the oxytriazole pyridazines with the cations of some metals can yield complex compounds the authors of this paper synthesized a number of these compounds (Refs 5,6). They mixed the corresponding keto ester with the 4-amino triazole and heated the mixture at 180-200° for 20-30 minutes, with the alcohol and the water being driven off. In a too energetic process, as is the case with the 2-carbethoxy cyclopentanone (under the formation of compound (III)) xylene, toluene or benzene were added and the aceotropic mixture was slowly driven off. It is interesting to learn that the yield depends on the velocity of heating. In the case of a slow heating

a resinification (Reaction Scheme 2) occurs. In the case of the 2-carbethoxy cyclohexanone no condensation products are obtained. The condensation of the amino triazole with the α-formyl phenyl acetate also failed. Based on the results obtained the condensation of amino triazole was carried out with malonic ester. As it was not expected, also an excess malonic ester with two molecules amino triazole enters reaction and forms the N,N'-di-(1,2,4-triazolyl-4)-malonamide (X). Cyclization products at the expense of the hydrogen atoms of the triazole nucleus could not be found. The structure of the diamide (X) was proved by the infrared absorption spectrum. The acetic solution of this diamide precipitates the ions Cu^{2+}, Ni^{2+} and Co^{2+}, but not Al^{3+}, Cd^{2+}, Bi^{3} and Th^{4+} from the aqueous solution in the presence of sodium acetate. No precipitation takes place in alkaline medium. This reaction does not take place so easily with ethyl malonic ester under the formation of compound (XI)(15,2% yield) and almost not at all with butyl malonic ester. In the reaction of

Reactions of the Hydrazine Derivatives. XIX. Condensations of 4-Amino-(1,2,4)-Triazole With Esters

SOV/79-28-10-29/60

amino triazole with diethyl oxalate the compound (XII) was obtained. This diamide precipitates the ions Cu^{2+}, Mg^{2+} and Cd^{2+} in alkaline medium in the presence of sodium tartrate, and in acetate medium the ions Cu^{2+}, however, not Al^{3+} and Fe^{3+}. The cyanethylation of 4-amino triazole in alkaline medium is described. There are 14 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: September 11, 1957

Card 3/3

GENTIU, Iuliu, ing.; DUMITRESCU, Petre

The first Rumanian machine for the core forming through shooting. Metalurgia constr mas 14 no.1:26-30 Ja '62.

1. Institutul de studii, cercetari si proiectari tehnologice pentru industria constructoare de masini, utilaje si industria electrotehnica.

GENTS, I. P., FILIMONOV, I. I., FROLOV, A. S., and LUK'YANOV, Ya. A.

Useful book ("Pile fabrics and their production." M. D. Talyzin. Reviewed by I. P. Gents, I. I. Filimonov, A. S. Frolov, Ya. A. Luk'yanov). Tekst. prom. 12, No 9, 1952.

GENTS I.P.

CHERNYY, M.D.; GENTS, I.P., retsenzent; SEGAL', N.M., redaktor; KOGAN, V.V., tekhnicheskiy redaktor

[Construction and maintenance reeling machines in the silk industry] Ustroistvo i obsluzhivanie motal'nykh mashin shelkovoi promyshlennosti. Moskva, Gos. nauchno-tekhn. izd-vo Ministerstva legkoi promyshl.SSSR, 1956. 146 p. (MLRA 10:3)
(Silk manufacture) (Textile machinery)

GENTS, I.P.

Efficient workers in the silk industry making efforts toward technical progress. Tekst.prom. 16 no.1:47-49 Ja '56. (MIRA 9:4)
(Silk manufacture)

GENTS, Ivan Pavlovich; MONINA, Praskova Vladimirovna; BUYLOV, Ivan Ivanovich; ZORINA, Mariya Aleksandrovna; AFANAS'YEVA, Valentina Pavlovna; AGAPOVA, N.P., kand.tekhn.nauk, retsenzent; ORLOVA, L.A., red.; MEDVEDEV, L.Ya., tekhn.red.

[Design, operation, and maintenance of the "Tekstima" warping machine] Ustroistvo, rabota i obsluzhivanie lentochnoi snoval'noi mashiny tekstima. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po legkoi promyshl., 1959. 79 p. (MIRA 12:12)
(Looms)

NOVIKOV, N.A.; TEL'NOVA, V.M.; GENTS, I.P., FEDOROVA, Ye.F.

Boxes for the transportation of artificial silk . Standartizatsiia 25 no.2:48-49 F '61. (MIRA 14:3)
(Boxes—Standards)

BORISOV, M.I.; BOGDANOV, N.P.; GENTS, N.N.; TAMM, A.I.; FILATOVA, I.T., red.; GOLICHENKOVA, A.A., tekhn.red.

[Trade Union of Builders; brief outline history] Profsoiuz stroitelei; kratkii istoricheskii ocherk. Moskva, Izd-vo VTsSPS, Profizdat, 1959. 190 p. (MIRA 13:5)
(Trade unions)

GENTSCHEV, T.

Perivascular glycogen and barrier mechanisms in C.N.S. Dokl. Bolg. akad. nauk 18 no.3:267-270 '65

1. Submitted on November 9, 1964.

L 02154-67
ACC NR: AP6035988 SOURCE CODE: BU/0011/65/018/003/0267/0270

GENTSCHEV, T.
ORG: none

"Perivascular Glycogen and Barrier Mechanism in C.N.S."

Sofia, Doklady Bolgarskoy Akademii Nauk, Vol 18, No 3, 1965, pp 267-270

TOPIC TAGS: central nervous system, hematoencephalitic barrier, polysaccharide

Abstract: /English article/ The problems of vascular permeability, blood-brain barrier, and their structural causes are among the current problems of experimental neurology. A careful check of the scientific literature showed that the problem of the barrier mechanism in the central nervous system (C.N.S.) is still a wide open question and, consequently, the author decided to turn his attention to unstable metabolic substances whose presence within the nerve tissue is difficult to reveal by morphological means. This article describes a detailed study of glycogen deposits around the vessels of the C.N.S. utilizing a new technique described elsewhere (T. Gentschev, Acta histochem., 12, 1961, 330-336). This new approach avoids the inconveniences of arterial perfusion and, at the same time, reduces the danger of postmortal hydrolysis of glycogen to a minimum. Tests on five guinea pigs, 40 mice, and 15 rats (suddenly frozen in liquid oxygen) showed that some vessels are indeed surrounded by a "glycogen sheet" while others are not. This seems to indicate that permeability and barrier functions within the C.N.S. can be also performed without the presence of a glycogen sheet. This paper was presented by Academician G. Usunoff on 9 November 1964. Orig. art. has: 3 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 09Nov64 / SOV REF: 001 / OTH REF: 007

Card 1/1

L 20737-66 EWP(k)/EWT(m)/T/EWA(d)/EWP(w)/EWP(t) JD/HW
ACC NR: AP6010133 SOURCE CODE: UR/0122/66/000/003/0067/0069

AUTHOR: Kats, R. Z. (Candidate of technical sciences); Zamanskaya, F. P. (Engineer); Gentse, M. V.; Khoroshko, V. P.; Kashkina, S. T.

ORG: none

TITLE: Explosive strengthening of G13L steel

SOURCE: Vestnik mashinostroyeniya, no. 3, 1966, 67-69

TOPIC TAGS: high manganese steel, explosive strengthening, austenitic steel, steel strengthening / G13L steel

ABSTRACT: Explosive strengthening of G13L steel (0.9—1.4% C, 11.0—14.0% Mn, 0.4—1.0% Si, 0.2% Cr, 0.2% Ni) used for railroad frog-points has been investigated. Strengthening was done either by detonation of a charge placed directly on the frog-point or by impact of a plate activated by an explosion. In both methods the frog-point had to be coated with a layer of clay to prevent the formation of small surface cracks. The explosion had a considerable effect on the physical and mechanical properties. It reduced the dimensions of the tested articles and increased the tensile strength from 62.4—82.4 to 103.1—110 kg/mm^2, and the yield strength from 39.0—45.4 to 83—99.0 kg/mm^2 at a satisfactory ductility. The surface hardness increased

Card 1/2 UDC: 621.787.044:669.15'74-194

L 20737-66

ACC NR: AP6010133

from 179—224 to about 302—450 HB. Along the depth, the hardness gradually decreased to the original value at a depth of 28 mm. Orig. art. has: 3 figures and 2 tables. [WW]

SUB CODE: 11/ SUBM DATE: none/ ATD PRESS: 4225

Card 2/2

OKNTSEVA, Revekka Venediktovna; SAVEL'YEVA, Klavdiya Tikhonovna; ARAPOV, Yu.A., redaktor; SHISHKOVA, M.V., redaktor izdatel'stva; KRYNOCHKINA, K.V., tekhnicheskiy redaktor

[Manual for the identification of uranium minerals] Rukovodstvo po opredeleniiu uranovykh mineralov. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nedr, 1956. 259 p. (MLRA 10:3)
(Uranium ores)

VDOVTSOVA, Ye.A., kandidat khimicheskikh nauk; TSUKERVANIK, I.P., professor, otvetstvennyy redaktor; SARYMSAKOV, T.A., glavnyy redaktor; RYZHOV, S.N., professor-doktor, zamestitel' glavnogo redaktora; ROMANOVSKIY, V.I., redaktor; KOROVIN, Ye.P., redaktor; MASSON, M.Ye., redaktor; KORZHENEVSKIY, N.L., redaktor; POPOV, V.I., professor-doktor, redaktor; MIROSHKINA, N.M., professor, redaktor; STOLYAROV, D.D., dotsent, redaktor; BONDAREVSKIY, G.L., dotsent, redaktor; KRASNOVAYEV, I.M., dotsent, redaktor; GEMTSHKE, L.V., dotsent, redaktor

[Radical and ionic alkylation of aromatic compounds] Radikal'nyi i ionnyi mekhanizmy reaktsii alkilirovaniia aromaticheskikh soedenenii. Erevan, Izd-vo Erevanskogo universiteta, 1953. 92 p. (Tashkent. Universitet. Trudy Srednesiatskogo gosudarstvennogo universiteta. no.43. Khimicheskie nauki, no.6)

1. Deystvitel'nyy chlen Akademii nauk UzSSR (for Sarymsakov, Romanovskiy, Korovin). 2. Deystvitel'nyy chlen Akademii nauk Turkm. SSR (for Masson). 3. Chlen-korrespondent Akademii nauk UzSSR (for TSukervanik, Korzhenevskiy).

(Arotmatic compounds) (Alkylation)

GERTNER, V.

TECHNOLOGY

Periodicals: INSENYRSKE STAVBY Vol. 7, no. 3, Mar. 1957

GERTNER, V. Foundations for constructions on sandy earth fill. p. 81.

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 5
May 1959, Unclass.

GENTINER, Viktor, inz.

Gravel sand bottoming as foundation for a transformer station.
Inz stavby 10 no.1:28-30 Ja '62.

1. Chemoprojekt Praha.

GENUA, F. F.

26605 Novye metody remonta ognevykh kamer sudovykh kotlov s primeneniem elektrodugovoy svarki. Rech. Transport, 1949, No. 4, s. 14-16.

SO: LETOPIS' NO. 35, 1949

STEL'BOYM,P.S., inzhener; GENUSOV,A.Sh., inzhener

"Preparing yarn for the knitting industry." L.P.Inganova. Reviewed by P.S.Sel'boim, A.Sh.Genusov. Leg.prom. 15 no.6: 52-53 Je '55. (MLRA 8:8)
(Knit goods industry) (Ignatova,L.P.)

CHICTAN, Constantin; GENUNCHE, Ana

Obtaining radioactive iron from compex compounds by the Szillard-Chalmers reactions. Studii cerc chim 7 no.4:581-585 '59. (EEAI 9:7)

1. Institutul de fizica atomica al Academiei R.P.R., Bucuresti.
(Iron) (Radioisotopes) (Szilard-Chalmers reaction)
(Potassium ferricyznide) (Potassium ferrocyznide)

Geanuche, A

R/003/60/011/005/018/023
A125/A026

AUTHOR: None given

TITLE: Meeting of the Chemical Industry

PERIODICAL: Revista de Chimie, 1960, Vol. 11, No. 5, pp. 299 - 302

TEXT: In the meeting on "Radioisotopes in Research and Chemical Industry", III held on March 7 - 8, 1960, organized by Secţia Chimie - Comisia de Radiochimie (Chemical Section - Radiochemical Commission) led by Dr. G. Ioanid and opened by lecturer I. Drimuş, President of the Chemical Section, and by Professor, Academician S. Ţiţeica, the following papers were read: "Production of Radioactive Isotopes in Rumania" by C. Chiotan; "Production of Radioactive Iron From Complex Combinations by Szillard-Chalmers Reactions" by C. Chiotan and A. Genunche; "Gammagraphical Sources Produced at the Institute of Nuclear Physics" by L. Ciplea, P. Florican and M. Oncescu; "Principles for Planning and Organization of the Radiochemical Laboratories" by Al. Buşilă; "Protection of the Organism Against the Noxious Action of Ionizing Radiations With the Aid of Some Chemical Compounds" by Gh. Furnică; "Decontamination Within the Laboratories Operating With Radioactive Isotopes" by I. Gaspar and D. Şerban; "Application of Radioac-

Card 1/2

Meeting of the Chemical Industry

tive Isotopes in Chemical Industry" by G. Ioanid; "Achievements at the I.F.A. in the Field of the Radiation Chemistry" by D. Ştefănescu; "Ionizing Radiation, Initiator of the Oxidation Reaction of Paraffin" by G. Ioanid, Al. Drăgut, I. Drimus, A. Stoian and V. Dumitrescu; "Polymerization and 'Grafting' Operations Under the Influence of Ionizing Radiations" by B. Hlevca, F. Dragnea and M. Dinescu; "Sterilization of Medicines With Gamma Radiation" by D. Arizan, P. Adrian and A. Constantinide; "Synthesis of Medicines by Traced Atoms" by D. Arizan, P. Adrian and A. Constantinide; "Application of Radioactive Isotopes in Chemical Research" by S. Ionescu; "Achievements in Radiochemistry at the Chemical Institute of the Rumanian Academy, Cluj Affiliation and at the Department of Anorganic Chemistry of the Babeş-Bolyai University" by R. Ripan, Cr. Marcu and N. Pascu; "Tempering Processes in the Szillard-Chalmers Effect" by T. Costea; "Reactions of Isotopic Exchanges in Heterogeneous Medium" by I. Găinar; "Contributions to the Study of the Ionic Exchange on Cationic Resins. Utilization of Organic Solvents as Eluant Agents in the Cationic Exchange" by O. Constantinescu; "Works of the Researchers at the I.F.A. With Regard to the Utilization of Radioactive Isotopes in Analytic Chemistry" by T. Născuţiu; "Radiochemical Determinations in Ferrous Metallurgy" by Gh. Dumitrescu; and "Radiometric Measurings in Chemical Industry" by Gh. Ioanid.

Card 2/2

J

Country : USSR
Category: Soil Science Soil Biology

Abs Jour: RZhBiol , No 14 1958, No 63054

Author : Genusov, A.S.; Drabkina, A.V.; Strikan, B.I
Inst : Soil Science Institute of the A.S of the Uzbek. SSR
Title : Microflora of Takyrs of the Kuuya-Dar'inskaya Plain

Orig Pub: Tr. In-ta pochvoved AN UzSSR, 1956, vyp. 2, 219-239

Abstract: The general quantity of microorganisms in takyrs (gray and rose) is considerably less than in other USSR soils (52,000 per 1 g of soil), although diverse physiological groups of microbes are represented. The oligonitrophiles occupy a primary position (10,000 per 1 g), being the basic nitrogen fixers in the takyrs. Their maximum number is observed in the crust layer; it decreases gradually with depth.

Card : 1/4

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000514720018-3

J

Country : USSR
Category: Soil Science Soil Biology

Abs Jour: RZhBiol , No 14, 1958, No 63054

Bacilli form a large part of the total number of microbes, which is characteristic for soils of southern regions. Of the spore-bearing ammonifiers in the takyrs, Bac. mesentericus and Bac. idosus predominate; they assimilate well the ammonium-nitrate salts contained in the soil. The denitrifiers are contained, in relatively high titers, in almost all horizons, often extending to a great depth; moreover, seasonal variations are not observed in their numbers. The nitrifiers clostridia, butyrate and cellulose-decomposing bacteria and the actinomycetes are found in small quantities. On the whole, these nitrifiers appear to be the basic stimulants of the first phase. Nitrifiers

Card : 2/4

J

Country : USSR
Category: Soil Science. Soil Biology.

J

Abs Jour: RzhBiol., N. 14 1958, No 63054

and as a result of the activity of algae. In cultures of 10^{1}-10^{2} it is possible to find pectin-decomposing and also desulfurizing bacteria. Fungi constitute about 10% of the total microbe population, which the periodic humidification of the takyrs promotes. In summer, obviously, because of the extreme dryness of the soil, fungi decrease in numbers or completely disappear. Azotobacter, nitrite and lactate bacteria are not found in takyrs. Rose-colored takyrs, which receive a greater seasonal humidification, are richer in microorganisms. -- N.M. Lazareva

Card : 4/4

Country : USSR
Category: Soil Science. Soil Geography.

J

Abs Jour: RZhBiol., N. 14, 1958, No 63027

Author : Genusov, A.Z.
Inst : AS of the Uzbek SSR.
Title : The Development of Takyrs and Takyr Complexes in Ancient Alluvial Plains.

Orig Pub: V. sb.: Ref. nauchno-issled. rabot po lesn. khozyaystvu. Tashkent, AN UzSSR, 1957, 120-132

Abstract: Formation conditions for takyrs in the Kunya-Dar'inskaya ancient alluvial plain (the lower reaches of the Amu-Darya) are examined. The following stages in change of plant associations on the old-aged earths are noted: yantachno-itsygekovaya (homogeneous blocks of takyr soils), keyreukovaya (sandy takyr soils

Card : 1/3

J

Country : USSR
Category: Soil Science. Soil Genesis and Geography.

Abs Jour: RZhBiol., N 14 1958, No 63027

soils, into which they evolve under the action of biological factors -- the utilization of the takyrs by higher plants -- N.I. Bazilevich

Card : 3/3

GENUSOV, A. Z., Cand Agr Sci -- (diss) "On the development of takyrs and takyr complexes on old alluvial plains." Tashkent, Pub House Acad Sci UzSSR, 1958. 15 pp (Acad Sci UzSSR, Tashkent Agr Inst), 150 copies (KL, 16-58, 122)

GENUSOV, A.Z.; KARIMOV, T.K.; GORBUNOV, B.V., kand.geologo-mineralog. nauk, otv.red.; CHAYKA, G.V., red.izd-va; SHARIKOVA, V.P., tekhn.red.

[Soil formation on old alluvial plains of Central Asia] O razvitii pochvennogo pokrova na drevneallyuvial'nykh ravninakh Srednei Azii. Tashkent, Izd-vo Akad.nauk Uzbekskoi SSR, 1958. 134 p. (MIRA 12:9)
(Soviet Central Asia--Soil formation)